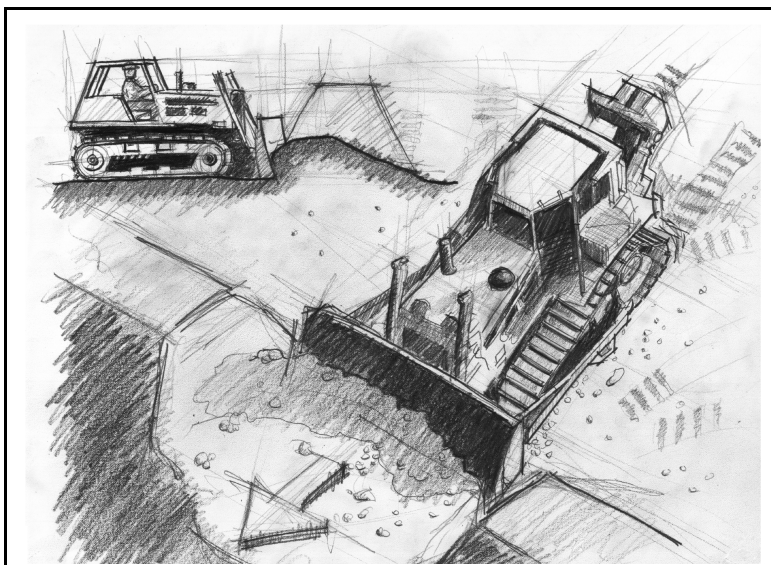


Bureau of Water

South Carolina Department of Health and Environmental Control

Closeout of Wastewater Treatment Systems

A guide to the approval process for closing out wastewater treatment and disposal systems



Revised October 2009



Preface

This document has been prepared for use by consulting engineers and treatment plant owners dealing with the Bureau of Water on closures of wastewater treatment systems. It provides:

- An overview of the Bureau's responsibilities,
- A summary of regulatory requirements,
- Identification of the entities involved in closures, and
- Highlights of the review and approval procedures.

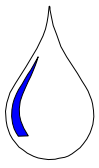
We hope this document will help everyone have a better understanding of the wastewater treatment system closure program. Through this understanding, we feel it will be easier to go through the administrative processes, technical reviews, and approval processes of the Bureau.

This document provides an explanation of the Bureau's decision-making processes. Our decisions are made based on the technical, administrative, and legal aspects of closures of wastewater treatment and disposal systems with the protection of the environment and public health as the major considerations.

The Bureau is committed to providing quality service in a reasonable time in all aspects of the permit programs. To do this, we need the cooperation of all parties who deal with us in recognizing our responsibilities and the manner in which we implement them. Therefore, please take the time to read this document carefully. This document is not a replacement for the regulations on wastewater treatment system closures but rather supplements the regulations. If you have any questions about our wastewater treatment system closure program, please let us know. We welcome any comments you may have on this document or suggestions on how we can improve our service to you and the public. Also, please visit our Environmental WEB Page at:

<http://www.scdhec.gov/environment/water/>

This Internet site has a variety of program information such as contacts, application forms, public notices, guidance documents, etc., for your use and downloading.



Why?

Q

Why are approvals needed for wastewater treatment system closures?

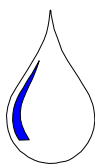
A

They are required by state law/regulations. Wastewater systems must be properly closed out for the protection of public health and the environment.

The Pollution Control Act (PCA) of SC, Title 48 of the 1976 Code of Laws as amended, in Section 48-1-20 declares the public policy of the State. The public policy is to maintain reasonable standards of purity of air and waters of the State while allowing for development of the state. This policy is to allow for maximum employment, protection of public health, and protection of terrestrial and marine flora and fauna. Also, physical property and other resources are to be protected. This responsibility requires that DHEC abate, control, and prevent pollution.

When a wastewater treatment plant (WWTP) or a disposal site is taken out of service, it must be properly closed out. Regulation 61-82, entitled “Proper Closeout of Wastewater Treatment Facilities,” and Regulation 61-67.300.F.17 of the “Standards for Wastewater Facility Construction” give the general requirements for the closure of WWTPs. See Appendices 1 and 2, respectively, for these regulations.

Depending upon the nature of the wastewater treatment plant or disposal site and environmental problems that may exist at them, the Bureau may require cleanups of surface water, groundwater, and soil. Also, sludge disposal and continued monitoring of surface and groundwater may be required.



Where?

Q *Where do I apply for closure approval?*

A *DHEC's Bureau of Water is responsible for approval of closures on wastewater treatment systems:
2600 Bull Street, Columbia, SC 29201*

The Bureau of Water (Bureau) is under DHEC's Office of Environmental Quality Control (EQC). The Bureau is responsible for protecting the quality of the State's surface and groundwater and pursuing safe drinking water for the public. To meet this responsibility, the Bureau issues permits, approvals, and certifications for a variety of wastewater and drinking water projects. This booklet explains the approval procedures of the Bureau for closures of wastewater treatment systems.

The Water Facilities Permitting Division of the Bureau of Water is responsible for approval of closure plans on wastewater treatment systems. The project owner and the type of project (e.g., subdivision, federal facility, etc.) determine which section handles a particular project.

An organizational chart for the Water Facilities Permitting Division can be found at:

http://www.scdhec.gov/environment/water/docs/chart.doc#_Water_Facilities_Permitting

Within the Division, the Domestic Wastewater Permitting Section handles closure plans for publicly and privately-owned wastewater treatment systems not categorized as industrial.

Wastewater treatment system projects handled by this Section include the following:

- | | |
|--------------------------------------|---|
| 1. Subdivisions | 12. Hotels and Motels |
| 2. Apartments | 13. Office Parks |
| 3. Condominiums | 14. Stadiums |
| 4. Trailer Parks | 15. Retail Stores and Malls |
| 5. Camp Grounds | 16. Fairgrounds |
| 6. Restaurants | 17. Parks |
| 7. Health Care Facilities | 18. Schools |
| 8. Highway Rest Facilities | 19. Country Clubs |
| 9. Churches | 20. Municipal-owned Sewer
Lines |
| 10. Non-Federal Prison
Facilities | 21. Any Other Project Type Not
Categorized As Industrial |
| 11. Private Sewer Utilities | |

The Industrial Wastewater Permitting Section handles closure plans on wastewater treatment systems for industries and federal facilities.

This section handles closure plans for industrial and federal facilities even if the wastewater is strictly domestic waste. Manufacturing plants, car washes, laundromats, agricultural sites, funeral homes, energy facilities (power plants), mining projects, industrial pretreatment facilities, and federally-owned and operated facilities are included in the Industrial Wastewater Permitting Section's responsibilities.

Others Involved in the Permitting Process

Other program areas of DHEC may be involved in the approval of closure plans on wastewater treatment systems. The Section responsible for review of the closure plan will coordinate with these program areas by providing basic information on the project. If these program areas need more information, they will request it from the treatment plant owner or other facility contact as appropriate. During the review of a project, the Section will notify the treatment plant owner or contact concerning other program areas.

Normally, approval of a closure plan will not be given until concurrence is received from the other program areas. Therefore, at the start of a project, the treatment plant owner or facility contact should contact the other program areas involved in the project. This will help avoid any delays in the approval process.

The following are the program areas that may be involved in the review process. Their type of involvement is given along with information concerning their requirements or permits.

Groundwater Management Section

The Section may request comments from the Bureau of Water's Groundwater Management Section if the project involves closure of in-ground units, land application of

sludge or wastewater, or if soil or groundwater impacts are suspected. Any necessary monitoring well approvals will be given through this program.

EQC Regional Offices

The Section may request comments from the appropriate Regional Office of EQC. The Regional Office will provide information to the Section on the proposed closure of a wastewater treatment or disposal system. Also, written final approvals for completed closures are granted by the Regional Offices. Please see Appendix 3 for a list of the Regional District Offices, the counties for which each is responsible, their telephone numbers, and their addresses. This information can also be found on the internet at:

<http://www.scdhec.gov/environment/envserv/regions.htm>

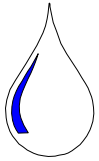
EQC's Bureau of Land and Waste Management

Disposal of sludge that is hazardous must be approved by the Bureau of Land and Waste Management. Therefore, any sludge or similar material must be properly characterized to determine whether it is hazardous. The Section will require approval from the Bureau of Land and Waste Management on the method of hazardous material disposal prior to approval of a wastewater treatment facility closure plan.

Related Permits

Closures of wastewater treatment systems may also require other DHEC approvals/permits such as stormwater permitting. If you are unclear, contact our office.

Regarding NPDES stormwater, most projects can be covered under a general permit issued by DHEC.



How?

Q *How do I apply for approval?*

A *The application package consists of a closure plan, a transmittal letter explaining the submittal, and location maps.*

For wastewater treatment facility and disposal site closures, a closure plan with supporting documentation is submitted to the appropriate Section of the Bureau. Closures have two phases which are:

- Closure Plan, and
- Closure Implementation and Final Approval.

Normally, there are no public notice requirements for closure plans. However, depending on the problems encountered and the selected disposal method for sludge, effluent, or other material, the Section may public notice the closure and disposal of these residuals.

Closure plans should be submitted at least six (6) months prior to the date the approval is needed. The actual approval time may be shorter or longer. This will depend upon the complexity of the project and the workload of the Section when the project is submitted.

Phase I: Closure Plans

a. Submittal Package

A complete administrative package must be submitted. The submittal package must include the following information:

- A transmittal letter outlining the submittal package.
- Three (3) copies of the closure plan.
- Three (3) copies of an 8 ½" x 11" location map.

Additionally, the Industrial Wastewater Permitting Section has developed a form (Form DHEC 1795 (09/2009)) to facilitate the development and review of industrial closure plans. This form can be found on the DHEC forms webpage at:

<http://www.scdhec.gov/environment/admin/htm/eqcforms.shtml#Water>

For lagoon systems and other systems with sludge disposal concerns, specific details on sludge disposal and groundwater monitoring should be included in the closure plan. A toxicity characteristic leaching procedure (TCLP) test must be performed on all sludges to identify suitable disposal methods. Sludge removal and disposal may also require approval from the Bureau of Land and Waste Management of EQC.

For nonhazardous domestic sludges including industrial facilities that treat only sanitary wastewater, Regulation 61-9 will likely play a role in the approval process. If the permittee plans to leave the sludge in place (e.g., lagoon system), this may constitute surface disposal of sludge under Subpart C of 61-9.503 and disposal under the Bureau of Land and Waste Management's solid waste management regulations, R.61-107. If so, it may be more cost-effective to remove the sludge for disposal or beneficial use. You should consult with the Domestic Wastewater Permitting Section or the Industrial Wastewater Permitting Section for assistance in evaluating the feasibility of beneficial use of the sludge.

Also, closure plans that propose groundwater monitoring must include a groundwater monitoring plan for review and approval.

For closures of municipal and private utility WWTPs and disposal sites, the closure plan should be sent to the Domestic Wastewater Permitting Section at the Bureau address given below. For federal and industrial WWTPs and disposal sites, the closure plan should be submitted to the Industrial Wastewater Permitting Section at the Bureau address given below:

*Bureau of Water
SCDHEC
2600 Bull Street
Columbia, SC 29201*

If the submittal of a closure plan is required as part of an NPDES or ND permit's schedule of compliance, a copy of the transmittal letter should be sent to the Bureau's Water Pollution Enforcement Section.

b. Processing

The review of closure projects will normally be on a "first come/first serve" basis by each program area. Therefore, closure plans will be reviewed in chronological order based on the date the complete package is received. Upon receipt of a complete package, the project will be placed in line for technical review. For

submittals missing certain administrative items, a letter will be sent out noting the deficiency.

For a complete submittal package, the requests for comments from the other program areas involved in the permitting process will be sent when the project is initially received. These requests will be sent to the Groundwater Management Section, the appropriate Regional Office of EQC, and the Bureau of Land and Waste Management, as appropriate.

c. Plan Review

When a project is assigned, it will be reviewed on a technical and administrative basis. The administrative review will ensure the Section coordinates with the appropriate program areas.

The technical review will be conducted utilizing standard reference books commonly used in the field of wastewater collection and treatment as appropriate.

Phase B: Closure Implementation and Final Approval

After approval of a closure plan, the facility or site will be closed as outlined in the plan. When the closure is completed, the treatment plant owner or facility contact will send a letter to the Regional Office certifying the project has been completed according to the approved closure report. The Regional Office will conduct a final inspection to verify the closure has been satisfactorily completed. If the closure is acceptable, a letter of approval will be written on the closure. If the closure is not acceptable, a copy of the inspection report or a letter will be sent to the consulting engineer. This letter or report will outline the problems with the closure.

APPENDIX 1

Regulation 61-82. Proper Closeout of Wastewater Treatment Facilities

The following regulation is promulgated pursuant to Section 48-1-50 of the 1976 S.C. Code of Laws. If any section, sentence or phrase of this Regulation is declared unconstitutional or void for any reason, the remainder of this Regulation shall remain effective and shall not be affected thereby.

SECTION I: Definitions

The definition of any work or phrase employed in Section II, III, IV and V shall be the same as given in the S.C. Pollution Control Act. The following words or phrases, which are not defined in said law, shall be defined as follows:

1. Lagoon - Lagoon shall mean a relatively small body of water contained in an earthen basin or controlled shape which is designed for treatment or handling wastewater.
2. Package Plant - Package plant shall include prefabricated factory assembled units and other modular type units designed for the treatment of wastewater through activated sludge processes and modifications thereof. Although not generally considered a package plant, for the purpose of this Regulation, Imhoff tanks shall be considered a package plant.
3. Closeout - Closeout shall mean the cessation of waste treatment facility operations in accordance with the appropriate sections of this Regulation.
4. Abandonment - Abandonment shall mean the cessation of daily visits to the waste treatment facility by the certified operator in charge for the purpose of ensuring proper operation and maintenance of a waste treatment facility.
5. "Should" and "Shall" - Should is permissive and shall is mandatory.

SECTION II: Proper closeout of lagoons

1. Lagoons shall be drained only after written permission has been obtained from DHEC and in accordance with one of the below procedures, (procedures in order of decreasing desirability):
 - a. Sewage from the lagoon may be pumped into the treatment facility or receiving system replacing the lagoons, provided that the rate is such that hydraulic and/or organic overloading and surging of the replacement system is prevented and provided that permission is obtained from the owner of the replacement system; or
 - b. If the above method is not possible, the lagoon may be drained into the receiving stream at a rate not exceeding the maximum design flow of the lagoon, provided

that before draining, the lagoon is allowed to stabilize without additional inflowing sewage for a period not less than the design detention time of the lagoon.

2. In each of the above alternatives, the lagoon shall be drained from the surface of the lagoon to prevent accumulated solids on the bottom of the lagoon from being carried out of the lagoon.
3. After the treated sewage has been drained from the lagoon, solid accumulation on the bottom of the lagoon shall be allowed to dry. A disinfectant suitable for control of odors and vectors shall be applied to all remaining solids when determined necessary by DHEC. After drying the solids should be mixed with soil and left on the bottom of the lagoon, be removed for disposal in an approved landfill, or disposed in some other approved method.
4. The lagoon may be filled with soil or may be allowed to remain bowl shaped, so as to be utilized for purposes other than waste handling, i.e., fish ponds, irrigation ponds, etc., provided that this practice does not violate local health and vector control regulations and DHEC approval of the close-out is obtained prior to any alternative use of the facility.

SECTION III: Proper closeout of package plants

Package plants shall be drained in accordance with one of the following procedures:

- a. Sewage may be pumped into the treatment facility or receiving system replacing the package plant, provided that the rate is such that overloading of the replacement system is prevented and provided that permission is obtained from the owner of the replacement system; or
- b. Sewage may be pumped into portable tanks for transfer and disposal in a sewer system, provided that permission is obtained from the owner of the receiving system.

SECTION IV: Proper closeout of waste treatment facilities not defined as lagoons and package plants.

Waste treatment facilities not defined as lagoons and package plants shall be closed out in accordance with guidelines issued by DHEC on an individual basis. These guidelines shall be designed to prevent health hazards and to promote safety in and around the abandoned sites.

SECTION V: Procedures applicable to all closeouts

1. A request for site inspection for closeout shall be made by the responsible official to DHEC.
2. A site inspection shall be conducted by DHEC and authorization to proceed with closeout granted by DHEC.

3. Monitoring as deemed necessary by DHEC to prevent water quality violations or nuisance conditions will be established on a case-by-case basis and carried out in accordance with DHEC guidance.
4. Upon completion of closeout the responsible party shall request an inspection by DHEC. The results of the inspection shall be reduced to writing and forwarded to the responsible official approving or disapproving the closeout. In cases of disapproval, discrepancies shall be noted and a follow-up inspection scheduled.
5. Closeout will be considered accomplished only after approval in writing from DHEC.
6. Areas around all waste treatment facilities undergoing closeout shall remain secured until closeout has been accomplished. In an instance of package plant closeout, the plant shall remain secured until electrical power has been disconnected and the plant is removed from the premises and depressions resulting from the removal of the system filled.

SECTION VI: Penalties

Any person determined to be in violation of the procedures outlined in this Regulation or found to have abandoned a waste treatment facility without initiating and completing approved closeout of the waste treatment facility shall be subject to civil and criminal penalties prescribed in Section 48-1-320 and 48-1-330 of the South Carolina Code of Laws, 1976.

APPENDIX 2

Regulation R.61-67.300.F.17 from R.61-67: Standards for Wastewater Facility Construction

All wastewater treatment facilities shall be closed out within one hundred and eighty (180) days in accordance with applicable regulations, when the facility is closed or the effluent disposal permit is inactivated, terminated, or revoked, unless determined by the Department that a greater time is necessary. The closure plan must be approved by the Department as a prerequisite to closure. Conversion of existing wastewater treatment facilities to other basins such as equalization basins or storage basins shall only be considered by the Department for approval when explicitly identified in the applicable 208 Water Quality Management Plan. In such cases, sludge disposal must comply with Regulation 61-9.503 and Regulation 61-9.504.

APPENDIX 3

Offices for Approval of Closure Completion

EQC Regions	EQC District Office	EQC District Office Phone Number	EQC Office Mailing Address	Counties
Region 1	Greenwood	864-223-0333	613 South Main Street Greenwood, SC 29646-3245	Abbeville, Edgefield, Greenwood, Laurens, McCormick, Saluda
	Anderson	864-260-5569	2514 Belton Hwy Anderson, SC 29621	Anderson, Oconee
Region 2	Greenville	864-241-1090	301 University Ridge Suite 5800 Greenville, SC 29601-3677	Greenville, Pickens
	Spartanburg	864-596-3800	900 South Pine Street, Suite 2A Spartanburg, SC 29302	Cherokee, Spartanburg, Union
Region 3	Columbia	803-896-0620	Bldg #5 / P.O. Box 156 State Park, SC 29147-0156	Fairfield, Lexington, Newberry, Richland
	Lancaster	803-285-7461	2475 DHEC Road Lancaster, SC 29720	Chester, Lancaster, York
Region 4	Florence	843-661-4825	145 E. Cheves Street Florence, SC 29506-2526	Chesterfield, Darlington, Dillon, Florence, Marion, Marlboro
	Sumter	803-778-6548	105 Magnolia Street (office) P.O. Box 1628 (mailing) Sumter, SC 29151	Clarendon, Kershaw, Lee, Sumter
Region 5	Aiken	803-641-7670 803-268-7303 - Orangeburg Area	206 Beaufort Street, NE Aiken, SC 29801-4476	Aiken, Allendale, Bamberg, Barnwell, Calhoun, Orangeburg
Region 6	Myrtle Beach	843-238-4378	927 Shine Avenue Myrtle Beach, SC 29577	Georgetown, Horry, Williamsburg
Region 7	Charleston	843-953-0150	1362 McMillan Avenue Suite 300 Charleston, SC 29405	Berkeley, Charleston, Dorchester
Region 8	Beaufort	843-846-1030	104 Parker Drive Burton, SC 29906	Beaufort, Colleton, Hampton, Jasper